

CLAIMS

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1. An audio entertainment system for storing and playing audio information, comprising:

a chassis for housing electrical components;

at least one audio input comprised in or located on the chassis for receiving input audio information;

at least one audio output comprised in or located on the chassis for generating signals;

a non-removable, non-volatile random-access storage system comprised in the chassis for storing audio information, wherein the non-volatile random-access storage system is rewritable, wherein the non-volatile random-access storage system is operable to receive and store the input audio information from the at least one audio input, wherein the non-volatile random-access storage system is operable to provide output audio information to the at least one audio output, wherein the non-volatile random-access storage system is substantially permanently affixed inside the chassis;

a user interface system for controlling the audio entertainment system; and

a user interface control system coupled to receive user input from the user interface system, wherein the user interface control system is coupled to one or more of the non-volatile random-access storage system, the at least one audio input, and the at least one audio output, wherein the user interface control system operates to control one or more of the non-volatile random-access storage system, the at least one audio input, and the at least one audio output in response to user input received from the user interface system;

wherein the non-volatile random-access storage system is operable to store audio information corresponding to a plurality of musical pieces;

wherein the user interface system is adapted to receive user input to select one or more musical pieces for audio presentation;

wherein the user interface control system is operable to receive said user input and control the non-volatile random-access storage system to provide corresponding output audio

information stored on the non-volatile random-access storage system to the at least one audio output for audio presentation.

2. The audio entertainment system of claim 1, wherein the chassis has a size and appearance which approximates a size of standard audio equipment;

wherein the user interface system has an appearance which approximates an interface of standard audio equipment.

(YTR) 3. The audio entertainment system of claim 1, wherein the non-volatile random-access storage system is operable to store a plurality of contents directories, wherein each of said contents directories identifies locations of a selected plurality of musical pieces according to common characteristics of said selected plurality of musical pieces;

wherein the user interface control system uses the contents directory to selectively access ones of said plurality of musical pieces.

4. The audio entertainment system of claim 1, further comprising:

a media reading system comprised in the chassis and coupled to the at least one input, wherein the media reading system is operable to receive at least one audio storage media, wherein the audio storage media stores audio information, wherein the media reading system is operable to read at least a portion of said audio information from the audio storage media and provide input audio information to the at least one audio input.

5. The audio entertainment system of claim 4, wherein the media reading system comprises a CD reading system;

wherein the audio storage media comprises a CD.

6. The audio entertainment system of claim 4, wherein the media reading system is
→ operable at faster than real-time.

7. The audio entertainment system of claim 4, wherein the non-volatile random-access storage system is operable to store a plurality of contents directories, wherein each of said contents directories identifies locations of a selected plurality of musical pieces according to common characteristics of said selected plurality of musical pieces;

wherein the user interface control system uses the contents directory to selectively access ones of said plurality of musical pieces;

wherein the non-volatile random-access storage system stores a database directory comprising information regarding contents of existing audio storage media;

wherein the user interface control system is operable to use said database directory to recognize audio storage media which are inserted into said media reading system;

wherein the user interface control system is operable to automatically add information to said contents directory from said database directory in response to recognizing an audio storage media.

8. The audio entertainment system of claim 1, wherein the at least one audio input includes a network input adapted for receiving input audio information from a network.

9. The audio entertainment system of claim 8, wherein the user interface system is adapted to receive user input comprising selection information for selecting one or more musical pieces over the network;

wherein the user interface control system is operable to receive said user input comprising selection information and control the network input and the non-volatile random-access storage system to receive said one or more musical pieces and store said one or more musical pieces on the non-volatile random-access storage system.

10. The audio entertainment system of claim 8, wherein the user interface system is adapted to receive user input comprising purchasing information for purchasing one or more musical pieces over the network;

wherein the user interface control system is operable to receive said user input comprising purchasing information and control the network input and the non-volatile random-

access storage system to receive said one or more musical pieces and store said one or more musical pieces on the non-volatile random-access storage system.

11. The audio entertainment system of claim 1, further comprising:

a digital compression system coupled to the at least one audio input and to the non-volatile random-access storage system, wherein the digital compression system is operable to receive the input audio information from the at least one audio input and operates to compress the input audio information to produce compressed audio information, wherein the digital compression system provides the compressed audio information to the non-volatile random-access storage system, wherein the non-volatile random-access storage system is operable to store the compressed audio information;

a digital decompression system coupled to the non-volatile random-access storage system and to the at least one audio output, wherein the digital decompression system is operable to receive the compressed audio information from the non-volatile random-access storage system and operates to decompress the compressed audio information to produce output audio information, wherein the digital decompression system provides the output audio information to the at least one audio output.

12. The audio entertainment system of claim 11, further comprising:

a processing unit comprised in the chassis and coupled to the non-volatile random-access storage system, the at least one audio input, and the at least one audio output, wherein the processing unit comprises one or more of the compression system, the decompression system, and the audio entertainment control system.

13. The audio entertainment system of claim 12, wherein the processing unit comprises or implements the compression system, the decompression system, and the audio entertainment control system.

14. The audio entertainment system of claim 11, wherein the digital compression system is designed to preserve approximately CD quality for multi-channel recordings as perceived by an average listener.

15. The audio entertainment system of claim 11, wherein the digital compression system operates to compress the input audio information with at least 4X as fast as real-time compression performance.

16. The audio entertainment system of claim 11, wherein the digital compression system and the digital decompression system operate simultaneously.

17. The audio entertainment system of claim 1,
wherein the user interface system comprises one or more user output displays comprised on the chassis for displaying information to the user.

18. The audio entertainment system of claim 1,
wherein the user interface system comprises one or more user inputs comprised on the chassis for receiving user input.

19. The audio entertainment system of claim 18, wherein said one or more user inputs comprised on the chassis comprise one or more of: buttons, knobs, touchscreen inputs, and switches.

20. The audio entertainment system of claim 1,
wherein the user interface system comprises a remote control device, wherein the remote control device is in wireless communication with the user interface control system for providing input to the user interface control system.

21. The audio entertainment system of claim 20, wherein the remote control device is in wireless communication with the user interface control system for receiving and displaying output from the user interface control system.

22. The audio entertainment system of claim 1,
wherein the user interface system comprises:
one or more user inputs comprised on the chassis for receiving user input; and
a remote control device, wherein the remote control device is in wireless communication with the user interface control system for providing input to the user interface control system.

23. The audio entertainment system of claim 1, wherein the at least one audio output is adapted to couple to speakers.

24. The audio entertainment system of claim 1, wherein the at least one audio output is adapted to couple through an amplifier to one or more speakers.

25. The audio entertainment system of claim 1, wherein the at least one audio input includes a network input adapted for coupling to a computing device, wherein the network input is adapted to receive audio input information from a network.

26. The audio entertainment system of claim 1, further comprising:
a computer;
wherein the at least one audio input includes an input/output connector adapted for coupling to the computer, wherein the input/output connector is adapted to generate / receive control information with the computer;
wherein the computer is operable to present a user interface which is useable in controlling the user interface control system.

27. The audio entertainment system of claim 1, wherein the at least one audio input includes an input/output connector adapted for coupling to a computer, wherein the input/output connector is adapted to generate / receive control information with the computer.

28. The audio entertainment system of claim 1, wherein the non-volatile random-access storage system comprises a magnetic storage medium.

29. The audio entertainment system of claim 1, wherein the non-volatile random-access storage system is operable to store a contents directory which identifies locations of said plurality of musical pieces;

wherein the user interface control system uses the contents directory to selectively access ones of said plurality of musical pieces.

30. The audio entertainment system of claim 1, wherein the non-volatile random-access storage system is operable to store one or more play lists, wherein each of said play lists identifies locations of a plurality of said musical pieces.

31. The audio entertainment system of claim 1, wherein the user interface system is operable to receive voice commands from a user to select one or more musical pieces for audio presentation;

wherein the user interface system is operable to recognize said received voice commands and control the non-volatile random-access storage system to provide corresponding output audio information stored on the non-volatile random-access storage system to the at least one audio output for audio presentation.

32. The audio entertainment system of claim 1, wherein the at least one audio output includes a network output adapted for generating output audio information to a network.

33. The audio entertainment system of claim 1, wherein the audio entertainment system is acoustically quiet.

34. The audio entertainment system of claim 1, wherein the user can review the audio information stored on the non-volatile random-access storage system, manipulate said audio information, and store said manipulated audio information back onto the non-volatile random-access storage system.

35. The audio entertainment system of claim 1, wherein in a first mode the audio entertainment system is operable to continuously store previously received audio input, wherein the user interface system is operable to receive user input to select at least a portion of said previously received and stored audio input.

36. An audio entertainment system for storing and playing audio information, comprising:

a chassis for housing electrical components;

at least one audio input comprised in or located on the chassis for receiving input audio information;

at least one audio output comprised in or located on the chassis for generating signals;

a non-volatile random-access storage system comprised in the chassis for storing audio information, wherein the non-volatile random-access storage system is rewritable;

a digital compression system coupled to the at least one audio input and to the non-volatile random-access storage system, wherein the digital compression system is operable to receive the input audio information from the at least one audio input and operates to compress the input audio information to produce compressed audio information, wherein the digital compression system provides the compressed audio information to the non-volatile random-access storage system, wherein the non-volatile random-access storage system is operable to store the compressed audio information;

a digital decompression system coupled to the non-volatile random-access storage system and to the at least one audio output, wherein the digital decompression system is operable to receive the compressed audio information from the non-volatile random-access storage system and operates to decompress the compressed audio information to produce output

audio information, wherein the digital decompression system provides the output audio information to the at least one audio output;

a user interface system for controlling the audio entertainment system; and

a user interface control system coupled to receive user input from the user interface system, wherein the user interface control system is coupled to one or more of the non-volatile random-access storage system, the digital compression system, the digital decompression system, the at least one audio input, and the at least one audio output, wherein the user interface control system operates to control one or more of the non-volatile random-access storage system, the digital compression system, the digital decompression system, the at least one audio input, and the at least one audio output in response to user input received from the user interface system.

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